


JC07 Rec'd PCT/PTO 21 MAR 2002

FORM PTO-1308 (REV. 11-2000)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTORNEY'S DOCKET NUMBER	
TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371				1807-0160P	
				U.S. APPLICATION NO. (If known, see 37 CFR 1.5)	
INTERNATIONAL APPLICATION NO.		INTERNATIONAL FILING DATE		PRIORITY DATE CLAIMED	
PCT/SE00/01883		September 28, 2000		10/08584 October 1, 1999	
TITLE OF INVENTION					
VEHICLE EXTENSION DEVICE					
APPLICANT(S) FOR DO/EO/US					
JOHANSSON, Arne					
Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:					
<p>1. <input checked="" type="checkbox"/> This is a <b>FIRST</b> submission of items concerning a filing under 35 U.S.C. 371.</p> <p>2. <input checked="" type="checkbox"/> This is a <b>SECOND</b> or <b>SUBSEQUENT</b> submission of items concerning a filing under 35 U.S.C. 371.</p> <p>3. <input checked="" type="checkbox"/> This express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39 (1).</p> <p>4. <input checked="" type="checkbox"/> The US has been elected by the expiration of 19 months from the priority date (Article 31).</p> <p>5. <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371(c)(2))</p> <p style="margin-left: 20px;">a. <input checked="" type="checkbox"/> is transmitted herewith (required only if not transmitted by the International Bureau). WO 01/25075</p> <p style="margin-left: 20px;">b. <input type="checkbox"/> has been transmitted by the International Bureau.</p> <p style="margin-left: 20px;">c. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US).</p> <p>6. <input type="checkbox"/> An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)).</p> <p style="margin-left: 20px;">a. <input type="checkbox"/> is transmitted herewith.</p> <p style="margin-left: 20px;">b. <input type="checkbox"/> has been previously submitted under 35 U.S.C. 154(d)(4)</p> <p>7. <input checked="" type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3)).</p> <p style="margin-left: 20px;">a. <input type="checkbox"/> are transmitted herewith (required only if not transmitted by the International Bureau).</p> <p style="margin-left: 20px;">b. <input type="checkbox"/> have been transmitted by the International Bureau.</p> <p style="margin-left: 20px;">c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired.</p> <p style="margin-left: 20px;">d. <input checked="" type="checkbox"/> have not been made and will not be made.</p> <p>8. <input type="checkbox"/> An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).</p> <p>9. <input type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).</p> <p>10. <input type="checkbox"/> An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).</p> <p>Items 11. to 20. below concern document(s) or information included:</p> <p>11. <input checked="" type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98, Form PTO-1449(s), and International Search Report (PCT/ISA/210) with 3 document(s).</p> <p>12. <input type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.</p> <p>13. <input checked="" type="checkbox"/> A FIRST preliminary amendment.</p> <p>14. <input type="checkbox"/> A SECOND or SUBSEQUENT preliminary amendment.</p> <p>15. <input type="checkbox"/> A substitute specification.</p> <p>16. <input type="checkbox"/> A change of power of attorney and/or address letter.</p> <p>17. <input type="checkbox"/> A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 35 U.S.C. 1.821-1.825.</p> <p>18. <input type="checkbox"/> A second copy of the published international application under 35 U.S.C. 154(d)(4).</p> <p>19. <input type="checkbox"/> A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).</p> <p>20. <input checked="" type="checkbox"/> Other items or information:</p> <p style="margin-left: 20px;">1.) International Preliminary Examination Report (PCT/IPEA/409)</p> <p style="margin-left: 20px;">2.) Three (3) Sheets of Formal Drawings</p> <p style="margin-left: 20px;">3.) International Application</p> <p style="margin-left: 20px;">4.) Form PCT/IB/304</p>					

JC10 Rec'd PCT/PTO 2 1 MAR 2002

U.S. APPLICATION NO. (if known, see 37 CFR 1.5)		INTERNATIONAL APPLICATION NO.		ATTORNEYS DOCKET NUMBER	
NEW 10/088584		PCT/SE00/01883		1807-0160P	
21. <input checked="" type="checkbox"/> The following fees are submitted:				CALCULATIONS PTO USE ONLY	
<b>BASIC NATIONAL FEE (37 CFR 1.492(a)(1)-(5):</b> Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO and International Search Report not prepared by the EPO or JPO. .... <b>\$1,040.00</b>  International preliminary examination fee (37 CFR 1.482) not paid to USPTO but International Search Report prepared by the EPO or JPO. .... <b>\$890.00</b>  International preliminary examination fee (37 CFR 1.482) not paid to USPTO but international search fee (37 CFR 1.445(a)(2)) paid to USPTO. .... <b>\$740.00</b>  International preliminary examination fee (37 CFR 1.482) paid to USPTO but all claims did not satisfy provisions of PCT Article 33(1)-(4). .... <b>\$710.00</b>  International preliminary examination fee (37 CFR 1.482) paid to USPTO and all claims satisfied provisions of PCT Article 33(1)-(4). .... <b>\$100.00</b>					
<b>ENTER APPROPRIATE BASIC FEE AMOUNT =</b>					
Surcharge of \$130.00 for furnishing the oath or declaration later than <input type="checkbox"/> 20 <input checked="" type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(e)).				\$ 130.00	
CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE		
Total Claims	12 - 20 =	0	X \$18.00	\$ 0.00	
Independent Claims	1 - 3 =	0	X \$84.00	\$ 0.00	
MULTIPLE DEPENDENT CLAIM(S) (if applicable) Yes			+ \$280.00	\$ 280.00	
<b>TOTAL OF ABOVE CALCULATIONS =</b>				\$ 1,320.00	
<input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. The fees indicated above are reduced by 1/2.				\$ 0.00	
<b>SUBTOTAL =</b>				\$ 1,320.00	
Processing fee of \$130.00 for furnishing the English translation later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(f)).				\$ 0.00	
<b>TOTAL NATIONAL FEE =</b>				\$ 1,320.00	
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property +				\$ 0.00	
<b>TOTAL FEES ENCLOSED =</b>				\$ 1,320.00	
				Amount to be: refunded \$	
				charged \$	
a. <input checked="" type="checkbox"/> A check in the amount of \$ <u>1,320.00</u> to cover the above fees is enclosed. b. <input type="checkbox"/> Please charge my Deposit Account. No. _____ in the amount of \$ _____ to cover the above fees. A duplicate copy of this sheet is enclosed. c. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. <u>02-2448</u> .  <b>NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.</b>  Send all correspondence to: Birch, Stewart, Kolasch & Birch, LLP or Customer No. 2292 P.O. Box 747 Falls Church, VA 22040-0747 (703) 205-8000  Date: <u>March 21, 2002</u>					
				By  #29690 Terrell C. Birch, #19,382	

107088584  
JC10 Rec'd PCT/PTO 21 MAR 2002PATENT  
1807-0160P

## IN THE U.S. PATENT AND TRADEMARK OFFICE

Applicant: JOHANSSON, Arne  
Int'l. Appl. No.: PCT/SE00/01883  
Appl. No.: New Group:  
Filed: March 21, 2002 Examiner:  
For: VEHICLE EXTENSION DEVICE

PRELIMINARY AMENDMENT**BOX PATENT APPLICATION**

Assistant Commissioner for Patents  
Washington, DC 20231

March 21, 2002

Sir:

The following Preliminary Amendments and Remarks are respectfully submitted in connection with the above-identified application.

AMENDMENTSIN THE SPECIFICATION:

Please amend the specification as follows:

Before line 1, insert --This application is the national phase under 35 U.S.C. § 371 of PCT International Application No. PCT/SE00/01883 which has an International filing date of September 28, 2000, which designated the United States of America.--

Docket No. 1807-0160P

IN THE CLAIM:

Please amend the claims as follows:

6. (Amended) An extension device for automotive vehicles according to claim 1, characterized by a guide pin (21) with a substantially cylindrical cross-section being arranged on the rear end section (14).

Docket No. 1807-0160P

REMARKS

The specification has been amended to provide a cross-reference to the previously filed International Application.

The claims have been amended to remove improper multiple dependencies.

Entry of the above amendments is earnestly solicited. An early and favorable first action on the merits is earnestly solicited.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

By  #2780

Terrell C. Birch, #19,382

P.O. Box 747  
Falls Church, VA 22040-0747  
(703) 205-8000

TCB/rem  
1807-0160P

Attachment: VERSION WITH MARKINGS TO SHOW CHANGES MADE

(Rev. 02/21/02)

Docket No. 1807-0160P

VERSION WITH MARKINGS TO SHOW CHANGES MADE

The specification has been amended to provide a cross-reference to the previously filed International Application.

IN THE CLAIMS:

The claims have been amended as follows:

6. (Amended) An extension device for automotive vehicles according to [any one of the previous claims] claim 1, characterized by a guide pin (21) with a substantially cylindrical cross-section being arranged on the rear end section (14).

112110 PAMAH  
2001-01-23

3/parts

10/088584

1 JC10 Rec'd PCT/PTO 2 1 MAR 2002

TITLE

Vehicle extension device

TECHNICAL FIELD

- 5 The present invention relates to an extension device for automotive vehicles, such as dumpers, comprising a framework with a front end section and a rear end section, said automotive vehicles including a forward vehicle section, supporting the prime mover, exhibiting a first articulation member, and a rear vehicle section exhibiting a second articulation member, said first and second articulation members being  
10 intended for connection with each other and for allowing pivoting of the vehicle sections, in relation to each other, around a longitudinal axis of the automotive vehicle.

BACKGROUND ART

- When manufacturing commercial automotive vehicles, such as dumpers, it is presently customary to offer, together with a standardised forward vehicle section, a rear, load-carrying vehicle section, the length of which is adapted to the intended area of application and to any built-on accessories, such as a crane. This is resolved by manufacturing the rear vehicle section with a large number of frame lengths.
- 20 The above approach is not cost-effective, however, as production and storage will both be expensive due to the relatively small production series. Further, modifications to the vehicle length cannot be allowed after delivery.
- 25 However, there are cases where the fixed framework of the rear vehicle section is cut off, whereupon extension beams are welded in to obtain, in this way, a vehicle of the required length.

- This, however, is a complicated and time-consuming operation, a/o requiring access to special tools and special equipment. Furthermore, such a solution may require  
30 giving the construction a lower strength at the joints, compared to the rest of the construction. Besides this, a subsequent treatment in the form of corrosion protection and painting has to be performed at the joints.

From SE 505 201 a vehicle chassis is previously known, intended for subsequent building-on of equipment, divided into a forward and a rear portion, each having two longitudinal frame members, connected to each other through an intermediate portion. Said intermediate portion comprises an intermediate framework and a number of holed junction members allowing free choice between a number of hole combinations for connecting the intermediate framework, by means of bolt or rivet joints, with the forward and rear portions of the vehicle chassis. An adjustment of the total length of the vehicle chassis can thus be made, in dependence of the selected size of the accessory subsequently to be fitted.

Although the method for extending vehicle frames described above enables an adaptation of the vehicle length, it still has some drawbacks. When modifying the vehicle length a large number of bolts, or rivets, will primarily have to be removed and, after the length adjustment, be refitted, which is very time-consuming. Furthermore, also in this case, there is a risk of the construction having a lower strength in relation to other framework portions.

Common to the above procedures for extension of automotive vehicles after delivery is that relatively large operations have to be performed on the framework of the vehicle, constituting a problem for the vehicle user.

#### DISCLOSURE OF INVENTION

The object of the invention is to enable an extension of the dumper without having to perform major reconstruction work on the dumper.

The above object is achieved by means of an extension device, the characteristics of which are defined by the independent claim 1.

It is a further object of the invention to provide a device for extension of automotive vehicles, such as dumpers, by which a simple, quick and secure adaptation can be made of the vehicle length, by utilising the parting line provided by the first and second articulation members of the dumper and inserting therebetween an extension device according to the present invention.

It is a further object of the invention to provide a device for extension of vehicles without having to perform extensive fitting work such as bolting/riveting/welding on the vehicle when one and the same vehicle is to be used for different work assignments.

5

The extension device according to the present invention is formed like a framework, comprising two parallel girders enclosed by walls, together defining an elongated, hollow girder having a forward end section and a rear end section, at least the forward one of said end sections being provided with a third articulation member, preferably in the form of a pivot sleeve with a circular cross section, which can be connected to the first articulation member arranged on the forward vehicle section of the dumper that is formed like a pivot pin having a circular cross section.

10

In a preferred embodiment of the present invention, the extension device is provided with a guide pin, the shape of which substantially coincides with said pivot pin, serving as a guide and reinforcement when fitting the extension device onto the rear, load-carrying vehicle section.

15

Further advantages and objects of the invention will become apparent from the appended claims and the following description.

20

#### BRIEF DESCRIPTION OF DRAWINGS

The invention will be described below in connection with preferred embodiment examples and the enclosed drawings, in which

Fig. 1 shows a side elevational view of a dumper equipped with an extension device according to the present invention,

Fig. 2 shows the front end section of an extension device according to the present invention,

Fig. 3 shows a longitudinal, vertical cross section through an extension device according to the present invention, and

Fig. 4 shows a longitudinal, vertical cross section through an extension device, fitted onto a rear vehicle section, according to the present invention.

25

## PREFERRED EMBODIMENT

Fig. 1 illustrates a side elevational view of an articulated or frame-steered vehicle, a so-called dumper 1, having in a known manner a forward vehicle section 2, supporting the prime mover, and a rear, load-carrying vehicle section 3, connected to the forward vehicle section 2 via a vertical pivot axle 4. Between the forward vehicle section 2 and the rear vehicle section 3, an extension device 10 according to the present invention is arranged.

The forward and rear vehicle sections, 2 and 3, respectively, are also pivotally connected to each other about a not shown horizontal pivot pin, allowing the vehicle sections to pivot in relation to each other about a longitudinal axis of the vehicle.

For steering of the vehicle 1 when being driven, the forward vehicle section 2 is brought to turn about the vertical pivot axle 4 by means of a pair of not shown hydraulic cylinders, arranged one on each side of the pivot axle 4. The torque delivered by the prime mover is transferred to the front wheels 5 and to the rear wheels 6, 7, via a not shown cardan shaft.

With reference to Figs. 2 and 3, a preferred embodiment of an extension device 10 according to the present invention will now be described. In the illustrated embodiment, the extension device 10 is formed like a framework comprising two parallel girders enclosed by walls, together defining an elongated, hollow girder. The framework hereby comprises an upper supporting portion 11 and a lower supporting portion 12 extending between a forward end section 13 and a rear end section 14. Adjacent to said upper supporting portion 11, two parallel girders 8, 9 extend between said end sections 13, 14. Side portions 15, 16, 17, 18 also extend between the end sections 13, 14, providing, together with the girders 8, 9 and the upper 11 and the lower 12 supporting portions, the stiffness and strength of the construction. According to a preferred embodiment, the above-mentioned portions 11, 12, 15, 16, 17, 18 and the sections 13, 14 are comprised of steel plates welded together to define said elongated, hollow girder.

In the forward end section 13, a third articulation member in the form of a pivot sleeve 19 with a circular cross section, intended for co-operation with a horizontal

pivot pin with a circular cross section, arranged on the forward vehicle section 2, allowing the extension device 10 to pivot, in relation to said forward vehicle section 2, about a longitudinal axis of the vehicle 1. In a preferred embodiment, the pivot sleeve 19 is on the one hand connected to the end section 13, on the other to a bulkhead 20, arranged in parallel with the end section 13 and constituting a connection member between said upper 11 and lower 12 supporting portions.

Fig. 3 shows an especially preferred embodiment of the present invention in which the rear end section 14 is provided with a guide pin 21 of circular cross section. When fitting the extension device 10 onto the rear vehicle section 3, the guide pin 21 will function as a guide, through being inserted into the articulation member 22 of the rear vehicle section 3. When the extension device 10 is fitted onto the rear vehicle section 3, the guide pin 21 will contribute to reinforcing the junction between the vehicle section 3 and the extension device 10.

Fig. 4 illustrates a more complete embodiment of the present invention with the extension device 10 fitted between the forward vehicle section 2 and the rear vehicle section 3. The guide pin 21 is hereby inserted into the articulation member 22 of the rear vehicle section 3, substantially coinciding in shape with the previously discussed pivot sleeve 19. To prevent rotation about the guide pin 21 of the extension device 10, relative to the rear vehicle section 3, a bolted joint 23 is provided, connecting the rear end section 14 of the extension device 10 with the rear vehicle section 3. Said bolted joint 23 is accessed through an aperture 24 provided in the upper supporting portion 11.

In Fig. 4, the previously mentioned horizontal pivot pin 25 is shown, which is connected, via the pivot axle 4, to the forward vehicle section. The pivot pin 25 is locked in the axial direction in relation to the pivot sleeve 19 of the extension device, by means of a locking member in the form of a nut 29 arranged to co-operate with a threaded portion 30 on the pivot pin 25.

According to a preferred embodiment, the dumper 1 is provided with a drive for the rear pairs of wheels 5, 6, and the torque provided by the prime mover is then transferred via a cardan shaft 26, 27 where the cardan shaft portion 27, located inside the

extension device 10, is an extension member. Said cardan shaft portion 27 is preferably rotatably supported, for example by a ball bearing assembly 28, inside the guide pin 21.

5 According to a preferred embodiment of the extension device 10, a brake caliper 31 is fixedly connected to the framework of the extension device 10. Said brake caliper 31 is co-operating with a brake disc 32 arranged on the cardan shaft portion 27. When the brake caliper 31 is activated, in the known manner, the rear wheels 6, 7 are braked.

10

The term dumper, as used in the description and in the claims, shall mean any type of commercial automotive vehicle equipped with a forward vehicle section, supporting the prime mover, and a load- or equipment-carrying rear vehicle section, said vehicle sections being interconnected by means of a pivot joint allowing the vehicle sections to pivot, in relation to each other, about a longitudinal axis of the vehicle.

15

The invention will not be limited to what has been stated above, but may be varied within the scope of the appended claims. For example, the guide pin 21 could be excluded and replaced by any other type of fixation, such as a bolted or welded connection. Further, said first and second articulation members do not have to be formed like a pivot pin and a pivot sleeve, respectively, but could be formed like a turntable comprising a vertical ball bearing assembly, the rotational axis of which would be parallel with the longitudinal axis of the vehicle, one bearing race of the assembly being affixed to the forward vehicle section and the other bearing race being affixed to the rear vehicle section. In the above embodiment example, relative rotation is taking place between the vehicle sections at the connection between the forward vehicle section and the extension device, but it should be evident to the person skilled in the art that the rotation could just as well take place between the rear vehicle section and the extension device, or even at both of the above-mentioned locations. Furthermore it is advantageous to provide the extension device with a built-on accessory in the form of for example a crane.

20  
25  
30

112110 PA/MAH  
2001-01-23

## CLAIMS

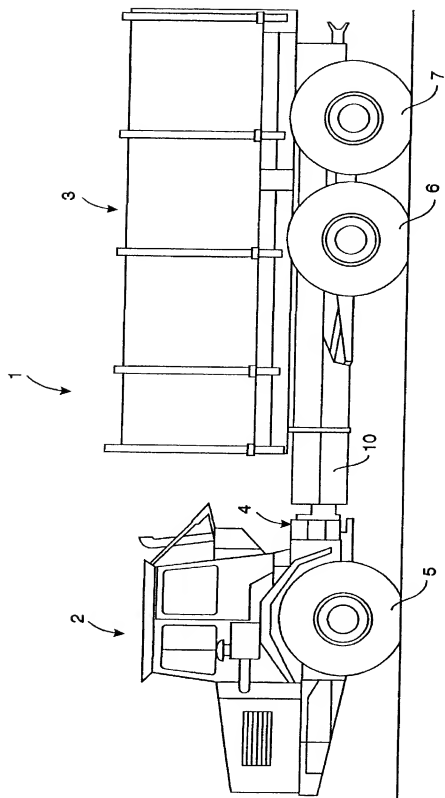
1. An extension device for automotive vehicles, such as dumpers (1), comprising a framework with a front end section (13) and a rear end section (14),  
5 said automotive vehicles including a forward vehicle section (2), supporting the prime mover, exhibiting a first articulation member (25), and a rear vehicle section (3) exhibiting a second articulation member (22), said first (25) and second articulation members (22) being intended for connection with each other and for allowing pivoting of the vehicle sections (2, 3), in relation to each other, about a longitudinal  
10 axis of the automotive vehicle, c h a r a c t e r i s e d b y at least one of said end sections (13, 14) being provided with a third articulation member (19) intended for connection with one of said first (25) or second (22) articulation members.
2. The extension device for automotive vehicles according to claim 1,  
15 c h a r a c t e r i s e d b y said first articulation member (25) comprising a pivot pin having a circular cross section and being intended for connection with said third articulation member (19) consisting of a pivot sleeve with a circular cross section.
3. The extension device for automotive vehicles according to claim 2,  
20 c h a r a c t e r i s e d b y said framework comprising at least two, substantially parallel girders (8, 9), extending between said end sections (13, 14).
4. An extension device for automotive vehicles according to any one of the previous claims, c h a r a c t e r i s e d b y said framework comprising an  
25 upper supporting portion (11), a lower supporting portion (12) and side portions (15, 16, 17, 18), said portions extending between said end sections (13, 14).
5. The extension device for automotive vehicles according to claim 4,  
c h a r a c t e r i s e d b y said upper supporting portion (11) being provided with  
30 an aperture (24), allowing access to the inside of the extension device (10).
6. An extension device for automotive vehicles according to any one of the previous claims, c h a r a c t e r i s e d b y a guide pin (21) with a substantially cylindrical cross-section being arranged on the rear end section (14).



112110 PA/MAH  
2001-01-23

#### ABSTRACT

- The present invention relates to an extension device for automotive vehicles, such as dumpers, comprising a framework with a front end section and a rear end section, said automotive vehicles including a forward vehicle section, supporting the prime mover, exhibiting a first articulation member, and a rear vehicle section exhibiting a second articulation member, said first and second articulation members being intended for connection with each other and for allowing pivoting of the vehicle sections in relation to each other, about a longitudinal axis of the automotive vehicle.
- 10 The extension of the automotive vehicle is achieved through introducing said extension device between the forward and the rear vehicle portion of the dumper.



1/3

Fig.1

2/3

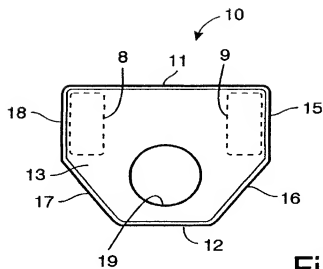


Fig.2

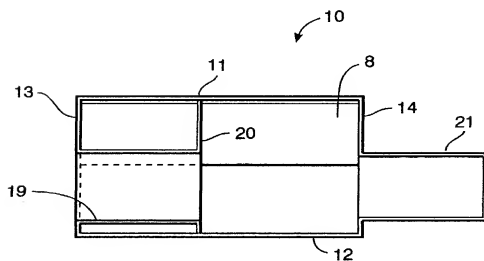
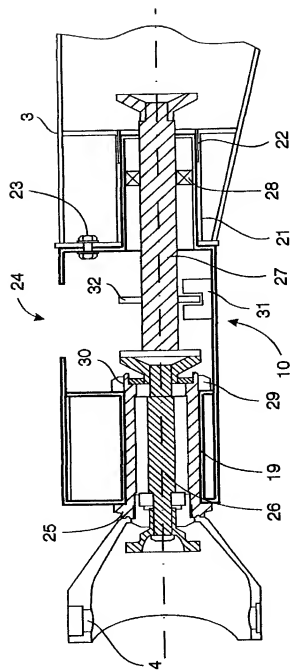


Fig.3

3/3

Fig.4



## BIRCH, STEWART, KOLASCH &amp; BIRCH, LLP

## COMBINED DECLARATION AND POWER OF ATTORNEY

ATTORNEY DOCKET NO

1807-0160P

PLEASE NOTE:  
YOU MUST  
COMPLETE THE  
FOLLOWING:



Insert Title:

VEHICLE EXTENSION DEVICE

As a below named inventor, I hereby declare that: my residence, post office address and citizenship are as stated next to my name; that I verily believe that I am the original, first and sole inventor (if only one inventor is named below) or an original, first and joint inventor (if plural inventors are named below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

Fill in Appropriate  
Information -  
For Use Without  
Specification  
Attached:



the specification of which is attached hereto. If not attached hereto,

the specification was filed on March 21, 2002 as  
United States Application Number \_\_\_\_\_; and /or

the specification was filed on \_\_\_\_\_ as PCT  
International Application Number \_\_\_\_\_; and was  
amended under PCT Article 19 on \_\_\_\_\_ (if applicable)

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, §1.56.

I do not know and do not believe the same was ever known or used in the United States of America before my or our invention thereof, or patented or described in any printed publication in any country before my or our invention thereof or more than one year prior to this application, that the same was not in public use or on sale in the United States of America more than one year prior to this application, that the invention has not been patented or made the subject of an inventor's certificate issued before the date of this application in any country foreign to the United States of America on an application filed by me or my legal representatives or assigns more than twelve months (six months for designs) prior to this application, and that no application for patent or inventor's certificate on this invention has been filed in any country foreign to the United States of America prior to this application by me or my legal representatives or assigns, except as follows.

I hereby claim foreign priority benefits under Title 35, United States Code, §119 (a)-(d) of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

Insert Priority  
Information:  
(if appropriate)

➔ Prior Foreign Application(s)

Priority Claimed

(Number)	(Country)	(Month/Day/Year Filed)	Yes	No
_____	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>
_____	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>
_____	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>
_____	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>
_____	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>

I hereby claim the benefit under Title 35, United States Code, §119(e) of any United States provisional application(s) listed below.

Insert Provisional  
Application(s):  
(if any)

➔ (Application Number) \_\_\_\_\_ (Filing Date) \_\_\_\_\_  
\_\_\_\_\_  
(Application Number) \_\_\_\_\_ (Filing Date) \_\_\_\_\_

All Foreign Applications, if any, for any Patent or Inventor's Certificate Filed More Than 12 Months (6 Months for Designs) Prior To The Filing Date of This Application:

Insert Requested  
Information:  
(if appropriate)

➔ Sweden Country 9903568-5 Application No 10/01/1999 Date of Filing (Month/Day/Year)  
PCT PCT/SE00/01883 09/28/2000

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, §1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application:

Insert Prior U.S.  
Application(s):  
(if any)

➔ (Application Number) \_\_\_\_\_ (Filing Date) \_\_\_\_\_ (Status - patented, pending, abandoned)  
\_\_\_\_\_  
(Application Number) \_\_\_\_\_ (Filing Date) \_\_\_\_\_ (Status - patented, pending, abandoned)

I hereby appoint the following attorneys to prosecute this application and/or an international application based on this application and to transact all business in the Patent and Trademark Office connected therewith and in connection with the resulting patent based on instructions received from the entity who first sent the application papers to the attorneys identified below, unless the inventor(s) or assignee provides said attorneys with a written notice to the contrary:

16 Terrell C. Birch (Reg. No. 19,382)  
Joseph A. Kolasch (Reg. No. 22,463)  
Bernard L. Sweeney (Reg. No. 24,448)  
Charles Gorenstein (Reg. No. 29,271)  
Leonard R. Svensson (Reg. No. 30,330)  
Andrew D. Meikle (Reg. No. 32,868)  
Joe McKinney Muncy (Reg. No. 32,334)  
C. Joseph Faraci (Reg. No. 32,350)

Raymond C. Stewart (Reg. No. 21,066)  
James M. Slattery (Reg. No. 28,380)  
Michael K. Mutter (Reg. No. 29,680)  
Gerald M. Murphy, Jr. (Reg. No. 28,977)  
Terry L. Clark (Reg. No. 32,644)  
Marc S. Weiner (Reg. No. 32,181)  
Donald J. Daley (Reg. No. 34,313)

Send Correspondence to:

**BIRCH, STEWART, KOLASCH & BIRCH, LLP**

**P.O. Box 747 • Falls Church, Virginia 22040-0747**

**Telephone: (703) 205-8000 • Facsimile: (703) 205-8050**

PLEASE NOTE:  
YOU MUST  
COMPLETE THE  
FOLLOWING:

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full Name of First or Sole Inventor  
Insert Name of Inventor  
Insert Date This Document is Signed

Insert Residence  
Insert Citizenship

Insert Post Office Address

Full Name of Second Inventor, if any

see above

Full Name of Third Inventor, if any

see above

Full Name of Fourth Inventor, if any

see above

Full Name of Fifth Inventor, if any

see above

GIVEN NAME Arne	FAMILY NAME Johansson	INVENTOR'S SIGNATURE <i>Arne Johansson</i>	DATE* April 16, 2002
Residence (City, State & Country) Braås, Sweden		CITIZENSHIP Sweden	
POST OFFICE ADDRESS (Complete Street Address including City, State & Country) Hasselvägen 39, S-360 42 Braås, Sweden			
GIVEN NAME	FAMILY NAME	INVENTOR'S SIGNATURE	DATE*
Residence (City, State & Country)		CITIZENSHIP	
POST OFFICE ADDRESS (Complete Street Address including City, State & Country)			
GIVEN NAME	FAMILY NAME	INVENTOR'S SIGNATURE	DATE*
Residence (City, State & Country)		CITIZENSHIP	
POST OFFICE ADDRESS (Complete Street Address including City, State & Country)			
GIVEN NAME	FAMILY NAME	INVENTOR'S SIGNATURE	DATE*
Residence (City, State & Country)		CITIZENSHIP	
POST OFFICE ADDRESS (Complete Street Address including City, State & Country)			
GIVEN NAME	FAMILY NAME	INVENTOR'S SIGNATURE	DATE*
Residence (City, State & Country)		CITIZENSHIP	
POST OFFICE ADDRESS (Complete Street Address including City, State & Country)			